



Globalization and location choice: an analysis of US multinational firms in 1980 and 2000

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Abstract

In this paper we examine *foreign location choices* of the top 100 US multinational corporations (MNCs) in 1980 and 2000. We first ask whether there has been a change in MNC foreign location choice in this two-decade period. Second, we explore the underlying reasons of location change by focusing on country-level factors, accounting for firm-, industry- and regional-level explanations. Our findings suggest, first, that the extent of MNCs' activities around the globe is more extensive than assumed by regionalists' arguments and well beyond Ohmae's TRIAD, but still less widespread than claimed by the globalists – the two main traditions within the globalization–regionalization debate. Second, we uncover an interesting *de-location* pattern in this period. Third, we develop an integrative framework where both economic and institutional-cultural arguments are shown to influence MNCs' foreign location choice in different ways. We conclude with a discussion of our findings, and provide suggestions for future research.

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Introduction

Multinational corporations (MNCs) have played a central role in the global economic, social and political changes commonly referred to as globalization (Held and McGrew, 2000). According to the United Nations Conference on Trade and Development (UNCTAD, 2005), there are more than 50,000 companies worldwide that qualify as MNCs, and the world's largest MNCs represent about 25% of the world's GDP, and virtually half of total world trade. In addition to MNCs' notable participation in the world economy, they are singled out as powerful ideological, cultural and political agents (Dicken, 1998; Agmon, 2003). The process of internationalization of MNCs and the rationale of their foreign location choice are at the core of IB research (Dunning, 1998; Eden and Lenway, 2001). The liberalization of capital markets, the acceleration of information flows, the higher mobility of people and products, the decline in transportation costs and a relative global regulatory harmonization are some of the factors that have influenced MNCs' internationalization strategies (Dunning, 2001, 2002; Gatignon and Kimberly, 2004).

Yet, whether MNCs' foreign location choices have changed in the last two decades as well as the reasons for choosing some countries over others as destinations of MNC activities remains inconclusive,

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and requires more systematic analysis. This paper seeks to answer these two research questions, and by doing so it addresses Dunning's (1998: 46) call for more IB scholarly attention to the change in the geographical spread of MNCs' activities in light of the global-scale transformations in the last few decades. We also partly speak to what Buckley and Ghauri (2004: 81) refer to as the 'next big question' in IB: that is, 'the analysis of globalization, with a focus on economic geography, arising from the changing strategy and the external impact of multinational enterprises (MNE) on the world economy'.

To explore whether MNCs' foreign location choices have changed in the last two decades, this paper engages with a heated recent debate within the IB literature. On one side of this debate, scholars claim that MNCs' activities have become increasingly regional during this period (Rugman, 2003, 2005; Rugman and Verbeke, 2004, 2007); on the other side of the debate, scholars emphasize the growing significance of global activities (Bird and Stevens, 2003; Clark and Knowles, 2003; Clark *et al.*, 2004). We believe that this globalization–regionalization debate is stalled because these two schools of thought use *different conceptual frameworks and operationalizations of globalization, region and MNC activities*. Our study seeks to provide some clarification to this debate by developing a comprehensive conceptual framework to understand foreign location choices as well as by designing a more fine-grained empirical analysis.

To answer our second question – what the host country determinants of MNC foreign location choice are – our conceptual framework examines the host country determinants of MNC foreign location choice, and explores whether these determinants have changed their influence in the last two decades. Drawing on the arguments offered by Dunning (1998) regarding the changing scope of determinants of location choice, we have bundled location choice determinants identified by previous research under two umbrella drivers/concepts: economic and institutional-cultural factors. A first research stream in the foreign location choice highlights the importance of *economic drivers* (Caves, 1996; Cantwell and Narula, 2003), where market size (Sethi *et al.*, 2003) and investment incentives (Loree and Guisinger, 1995) are key country-level determinants of the location choices of MNCs. A second tradition explains the location choice based on *institutional and cultural factors* (Guillén, 2000; Henisz and Delios, 2001;

Globerman and Shapiro, 2003). In addition, we explore how these two arguments complement each other.

We specifically tackle whether MNCs have changed their location choice preferences, and the country-level determinants of those choices, by focusing on a particularly relevant set of companies: the largest US MNCs. These firms are especially important because they engage in the highest percentage of foreign direct investment (FDI) around the world (Dunning, 2001), and because they tend to have a system of corporate governance that facilitates fully fledged global strategies (Aquilera and Yip, 2004). We choose two relevant points in time, 1980 and 2000, because comparing these two years allows us to examine differences in the foreign location choices during a period when the globalization process has bloomed and strengthened (Held and McGrew, 2000; Gatignon and Kimberly, 2004).

This paper makes several contributions to the internationalization literature and the foreign location choice research. Our definition of MNC activities and regions allow us to push further the internationalization literature, and in particular the globalization–regionalization debate, by uncovering three interesting patterns. First, we find that MNC activities have expanded well beyond the historically preferred regional locations. Second, by taking a more detailed regional categorization, we reveal that US MNCs have not only expanded their presence in some regions, such as South-East Asia, but have also withdrawn considerably from other regions, such as Central America. Moreover, US MNCs have also expanded to other regions not frequently noted, such as Western Asia (e.g., Kuwait and Saudi Arabia) and South-Eastern Asia (e.g., Indonesia, Malaysia, Singapore and Vietnam). Third, our findings are consistent with regionalists' arguments that regions matter; yet we show that the preferred regional locations have changed in the last two decades, as argued by the globalization scholars.

Regarding our contribution to the foreign location choice research, we develop a conceptual framework that integrates existing host-country-level determinants of foreign location choices. We bring together two perspectives – the economic and the institutional-cultural – which provides a richer account of the complexity of the foreign location choice research. Additionally, we explore the validity of Dunning's (1998) arguments regarding the shifts over time on these determinants. Our



findings show that neither economic factors nor institutional-cultural factors taken alone fully explain foreign location choice. Instead, systematically considering these two factors jointly, we are able to explain better MNCs' choices. We also find that some factors such as population become more salient in 2000 relative to 1980.

In developing our theoretical arguments and empirical testing, we structure the article as follows. First, we explore whether there has been a change in US MNCs' foreign locations in the context of the globalization–regionalization debate. Second, based on the existing literature, we identify critical host-country economic and institutional-cultural factors arguments explaining MNC location choices, and develop theoretically based hypotheses for the independent arguments as well as their integrated and temporal effects. We then describe our empirical setting, data collection and analyses conducted to assess the validity of our hypotheses. We finish with a discussion of the implications and limitations of our research.

Have the foreign location choices of US MNCs changed in the last two decades?

The IB literature has not specifically examined whether there has been a change in the location choice of US MNCs in the last two decades. The broader question on changes in MNC location choices is at the core of the globalization–regionalization debate, because it explicitly tackles the issue of whether, over time, MNCs have expanded globally or instead have focused their activities within certain regions (i.e., the TRIAD).

On one side of the argument are the *regionalists*, represented mainly by Rugman and his colleagues, who extended Ohmae's (1985) claims and conclude that MNCs' activities worldwide in the last two decades have continued to be mostly regional as opposed to global (Rugman, 2000, 2003, 2005; Rugman and Verbeke, 2004, 2007). Their findings draw on an analysis of the distribution of sales of the largest 500 MNCs in the world in 2001, and report that, out of that sample, 380 MNCs had 80% of their sales within the same region where they have their headquarters. Based on this empirical evidence, Rugman states that

both *globalization and the use of global strategy is a myth*. Far from taking place in a single global market, most business activity by large firms takes place within regional blocks. Government regulations and cultural differences segment the world into the broad triad regions of North America, the EU and Asia-Pacific. (Rugman, 2005: 2, emphasis added)

The regionalists' arguments are in direct contrast with those scholars who assert that MNCs are at the core of the globalization process, and qualify Rugman *et al.*'s definition of globalization as 'parochial and myopic' (Bird and Stevens, 2003; Clark and Knowles, 2003; Clark *et al.*, 2004; Stevens and Bird, 2004). Globalization scholars emphasize, first, that globalization goes beyond trade or economic events and, second, that even if one focuses on the economic dimensions of the globalization process, firms' revenues – the main dependent variable used by the Regionalists – do not necessarily capture MNC activities abroad (Clark and Knowles, 2003, Stevens and Bird, 2004). Third, Dunning and his colleagues (Dunning *et al.*, 2007) suggest that country-level data are necessary to strengthen the validity of Regionalists' claims. Finally, globalists argue that the regional categorization might be misleading, since, for instance, Rugman and Verbeke's European region includes in some cases countries that geographically fall into Africa and the Middle East, and their defined Asian region can also include Oceania countries (Stevens and Bird, 2004).

Our review of this globalization–regionalization debate reveals that, in order to move forward the discussion on whether the foreign location choices of MNCs have changed during the last two decades, we need an improved definition and operationalization of MNC activities and regions. Hence we define MNC activities as foreign capital investment, and examine several regional categorizations to address this question. Since a critical point of contention in the debate is the world regional partition, in Table 1 we illustrate MNC location choices by three regional categorizations between 1980 and 2000, and show that the overall number of capital investment units by US MNCs abroad has increased by 26% in this period.

Table 1a uses Ohmae's (1985) regional triad partition, and shows that the highest percentage change in US foreign investments over time (35%) is outside the TRIAD countries (Europe, US and Japan). We find similar results if we follow Rugman and Verbeke's (2004) regional category, as shown in Table 1b. Table 1c presents the same data as Tables 1a and 1b, but now grouped according to the UN-defined world regions – arguably a broader, more encompassing, regional categorization. With the UN world regional partition, we capture a much more detailed description of US MNCs' location choices over time, and a substantially different picture emerges. Table 1c shows that, even when

Table 1 US MNCs' foreign capital investments by regional categories (a) Ohmae's (1985) regional category; (b) Rugman and Verbeke's (2004) regional category; (c) UN's regional category

Regions ^a	1980	2000	Percentage change (2000–1980)
<i>(a)</i>			
Europe	498	535	7
Japan	65	77	18
North America	154	157	2
Outside the TRIAD	1571	2122	35
Total	2288	2891	26
$\chi^2_{(3)}=27.6; P<0.001$			
<i>(b)</i>			
Asia-Pacific	468	712	52
EU	698	783	12
North America	154	157	2
Outside the Core	968	1239	28
Total	2288	2891	26
$\chi^2_{(3)}=33.4; P<0.001$			
<i>(c)</i>			
Australia and New Zealand	117	113	−3
Caribbean	47	36	−23
Central America	173	152	−12
Eastern Africa	62	55	−11
Eastern Asia	142	281	98
Eastern Europe	0	191	n.a.
Melanesia	0	7	n.a.
Middle Africa	38	23	−40
Northern Africa	76	61	−20
Northern America	82	88	7
Northern Europe	227	305	34
South America	308	338	10
South-Central Asia	95	102	7
South-Eastern Asia	170	264	55
Southern Africa	49	53	8
Southern Europe	173	230	33
Western Africa	57	43	−25
Western Asia	90	166	84
Western Europe	382	383	0.3
Total	2288	2891	26
$\chi^2_{(18)}=344.3; P<0.001$			

^aSee the Appendix for a detailed description of each regional category.

there has been an overall growing presence of US MNC investments around the globe, this is not evenly distributed across regions. First, we discover a strong MNC *de-location* in certain regions, such as Africa, the Caribbean and Central America. This means that US MNCs had subsidiaries in these regions in 1980 and withdrew from them by 2000. This critical finding has not been addressed in the globalization–regionalization debate. Second, we are able to unbundle the non-core regions where US MNCs locate in 2000. Third, we show that, other

than the obvious location change towards Eastern Asia (i.e., China), other regions stand out as preferred location choices, such as Western Asia (oil countries), South East Asia (emerging markets), and Southern Europe (common trade area).

Additionally, our data allow us to test the regionalist argument regarding the increasing importance of the TRIAD regions. Table 2 compares whether US MNC location choices over time fall inside or outside the TRIAD regions. (Please see the Appendix for a list of countries included in each

Table 2 Regional assessment of US MNCs' capital investment (panel general equation estimation/probit)

Variables	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
Firm size	$7.4 \times 10^{-7***}$ (1.6×10^{-7})	$8.3 \times 10^{-7***}$ (1.7×10^{-7})	$8.4 \times 10^{-7***}$ (1.6×10^{-7})	$8.5 \times 10^{-7***}$ (1.8×10^{-7})	$8.6 \times 10^{-7***}$ (1.8×10^{-7})	$8.0 \times 10^{-7***}$ (1.7×10^{-7})	$8.1 \times 10^{-7***}$ (1.6×10^{-7})
Firm performance	0.008*** (9.7×10^{-4})	0.009*** (0.001)	0.002 (0.001)	0.009*** (0.001)	0.006*** (0.001)	0.009*** (0.001)	0.004*** (0.001)
Outside TRIAD		-1.55*** (0.04)	-1.66*** (0.04)				
Outside TRIAD × 2000			0.22*** (0.02)				
Outside RV's core				-1.19*** (0.02)	-1.26*** (0.03)		
Outside RV's core × 2000					0.13*** (0.02)		
Outside UN's core						-0.93*** (0.03)	
Outside UN's core × 2000							-1.01*** (0.03)
Constant	-0.47*** (0.09)	0.95*** (0.10)	1.05*** (0.10)	0.37*** (0.09)	0.42*** (0.09)	0.29** (0.09)	0.15*** (0.02)
Wald χ^2	1744***	3142***	3175***	3479***	3471***	2713***	2721***
N	27,489	27,489	27,489	27,489	27,489	27,489	27,489

* $P < 0.05$; ** $P < 0.01$; *** $P < 0.001$.

Values in parentheses represent semi-robust standard errors. All models include industry and firm dummies.

TRIAD (Ohmae, 1985) includes some European countries, Japan and North America; RV Core (Rugman and Verbeke, 2004) includes the Asia-Pacific, North America and the European Union as of 2003; UN Core is constructed to be comparable to the TRIAD and RV Core regional categories and includes four regions: North America, East Asia, Western Europe and Northern Europe. Please see the Appendix for details of each regional category.

regional category.) Models 3, 5 and 7 reported in Table 2 are statistical tests indicating that US MNCs are more likely to choose countries outside the core or set of regions singled out by Ohmae (1985) and Rugman and Verbeke (2004) in 2000 (as compared with 1980). This confirms our descriptive findings in Table 1. Now that we have demonstrated significant changes in the foreign location choices of US MNCs between 1980 and 2000, we turn to examine the key host-country-level determinants influencing these strategic choices, controlling for key firm-level effects.

What are the host country-level factors explaining US MNCs' foreign location choices?

The IB literature has a long tradition in examining why MNCs are able to effectively extend their operations beyond their home country (Johanson and Wiedersheim-Paul, 1975; Vernon, 1975), and what some of the drivers of these foreign location choices are (Buckley and Casson, 1976; Dunning, 1977; Johanson and Vahlne, 1977; Davidson, 1980). Previous research has identified as key determinants of the foreign location choices firm-level characteristics, such as size, performance and industry (Horst, 1972; Terpstra and Yu, 1988; Nachum and Zaheer, 2005), firm relational linkages (Chen and Chen, 1998), as well as country level, home (Henisz and Delios, 2001; Harzing and Sorge, 2003) and host country characteristics (Loree and Guisinger, 1995; Dunning, 1998). Even though we recognize the need to account for firm- and industry-level factors, in this article we *focus on exploring host country factors* determining MNCs' foreign location choices accounting for firm-, industry-, and regional-level effects.

To do so, we draw on Dunning's (1998) analysis, which highlights the shift in the factors influencing MNC location choice in the 1970s with respect to those in the 1990s. In particular, Dunning (1998) notes, first, that MNCs are increasingly pursuing market-seeking rather than asset-seeking (Makino *et al.*, 2002) or knowledge-seeking (Chung and Alcacer, 2002) strategies. Second, Dunning (1998) also notes the escalating weight of cultural and institutional factors when MNCs pick and choose among foreign locations because this allows them to minimize uncertainty and use their firm competences efficiently. We build upon these two insights, one based on an economic perspective and the other on an institutional perspective, to develop our conceptual framework to explain the

host country factors that determine MNC location choice. Hence our framework clusters existing factors predicting MNC location under two umbrella concepts: economic and institutional-cultural.

The economic perspective highlights the influence of factors directly linked to the profitability expectation of each host country market as the main driver of the location choice. In contrast, institutional-cultural arguments tend to emphasize the conditions of the host institutional and cultural environmental and how they are likely to affect MNC operations. In the latter, there is an emphasis on differences – that is, how much MNCs will have to adjust their norms and practices in the host country. These two perspectives have developed quite independently of each other. For example, Sethi *et al.* (2003: 317) point out that no empirical study has identified and included all variables from both perspectives. And, as stated by Dunning, ‘full explanation of MNE activity needs to draw upon an integrated variety of contextually related theories’ (Dunning, 2001: 43). In the following sections, we discuss the key factors in each research stream, propose testable hypotheses and develop an integrative conceptual framework bridging the insights from both perspectives.

Economically driven arguments

The economically driven research stream can be traced back to the work of Buckley and Casson (1976), who developed the ‘internalization paradigm’, which argues that MNCs exist and keep being successful around the world because they successfully *internalize* cross-border markets for technology, management skills and other factors. One of the factors that has received consistent support in empirical research as a driver of MNCs’ location choice is the size of the market of a particular country. For example, Contractor (1991) empirically shows a positive relationship between FDI and market size indicators such as GDP, GNP and growth rates. Similar findings are reported by Loree and Guisinger (1995) in a study of the location of US equity FDI and the GDP per capita of a country, and by Sethi *et al.*’s (2003) study looking at US FDI stock and flows during the period 1981–2000. Building on this previous research, and *in order to capture distinct characteristics of the market size dimension*, we distinguish between the acquisition level of a certain market, which we refer to as *market affluence*, and the number of potential customers, which we refer to as *market magnitude*. Applying to the firm level of analysis the finding

that there exists a positive relationship between market size (in its two components) and FDI, we expect that the higher the market size (affluence and magnitude) of a given country, the higher the levels of direct investment by US MNCs in those host countries. Then, we formally propose:

Hypothesis 1a: The higher the market affluence of a country, the higher the likelihood of receiving US MNCs’ capital investments.

Hypothesis 1b: The higher the market magnitude of a country, the higher the likelihood of receiving US MNCs’ capital investments.

Within the economic paradigm, in addition to expected revenue, expected costs can also be an important determinant of MNC location choice. Several scholars (Loree and Guisinger, 1995; Cheng and Kwan, 2000) have pointed out the relevance of available physical infrastructure at the host country. Physical infrastructure is an overarching construct that captures the availability and quality of infrastructure such as roads, ports, airports, telephone lines and others. Empirical evidence indicates that this construct influences MNCs’ decisions through the expected cost of operation in a particular host country – that is, the cost of moving raw and finished materials to and from the operative MNC centers (Root and Ahmed, 1978; Loree and Guisinger, 1995). Since US MNCs are likely to care about efficiency-seeking strategies to take advantage of their previous supply and marketing networks, we hypothesize that physical infrastructure would also be an important factor to be considered, and hence we propose:

Hypothesis 1c: The higher the degree of physical infrastructure of a country, the higher the likelihood of receiving US MNCs’ capital investments.

Finally, a key influential country-level variable that can factor into the expected cost structure of MNCs is the wages of the host country. Considering its relative importance in the cost structure of many MNCs, host governments often try to keep wages low, either by imposing certain wage limits or by managing the exchange rate to reduce the cost of labor (Meyer, 2004). Even though this factor has received considerable popular attention, little empirical scholarly research exists. In general, it is believed that countries with lower wages are



more likely to be considered by MNCs, typically concerned with reducing potential costs abroad (Kinoshita and Campos, 2004). One of the few existing empirical studies reports a direct relationship between host country wage rates and attracting export-oriented US FDI in 40 different countries (Kumar, 1994). More recently, Sethi *et al.* (2003) analyzed the determinants of US FDI stock and FDI flows during the period 1981–2000, and found that wage levels and wage differentials between the US and country recipients of those investments are significant predictors of FDI only for certain regions. We follow the economic logic that MNCs pursue resource seeking strategies and propose:

Hypothesis 1d: The lower the wage levels of a country, the higher the likelihood of receiving US MNCs' capital investments.

To conclude, as discussed before, Dunning (1998) argues that, in the last two decades, MNCs will likely shift their foreign location preferences toward market-seeking strategies. Based on this argument, we expect that the influence of the economic factors identified above, and in particular market size, will become more important for MNC location choice in 2000. We test this prediction in our empirical analysis.

Institutional-cultural-driven arguments

The eclectic paradigm also notes the significance of non-economic factors in MNC decision-making. This is consistent with other IB research, which emphasizes the importance of the institutional-cultural context of the host country environment for MNCs' location choice (Kobrin, 1976; Johanson and Vahlne, 1977; Loustarinen, 1979). Existing research on the influence of institutional-cultural dimensions on MNCs' strategies suggests that MNC decision-makers are aware of the pivotal influence of the institutional environment, broadly defined as institutional-cultural issues, and they take them into account when implementing different international strategies (Kedia and Mukherji, 1999). The rationale offered by the institutional-cultural perspective is that MNCs prefer to locate foreign operations in host countries that are more 'proximate/similar' to their home country, because this will substantially minimize uncertainty, and hence increase their likelihood of success. Some scholars have persuasively argued how institutional differences between home and host countries explain

MNCs' behavior (Kostova, 1999; Xu and Shenkar, 2002). Foreign countries tend to impose acute demands on organizational capabilities, given that MNCs need to interpret local customers' requirements, adjust corporate routines, adapt to new regulations and local norms, and gain local legitimacy, among others. The literature on institutional-cultural effects is well developed, and it generally includes legal, political and cultural dimensions. We discuss each of them in turn.

Empirical research demonstrates that both country-level political and legal institutions influence cross-national business practices. For example, Henisz and Delios (2001) argue that the credibility of the host country's government policy may steer away foreign investment. Host countries are likely to have distinct policies on the degree of trade protectionism, enactment of laws to prevent monopolies, existence of enforcement mechanisms to honor contracts, etc. Differences in political systems are likely to increase the cost and uncertainty of business-government communication channels (Dow and Karunaratna, 2006), and consequently are likely to shape the effectiveness of MNCs operating in that foreign environment (Goerzen and Beamish, 2003).

More specifically, when studying the influence of political institutions on US FDI, Loree and Guisinger (1995: 289) indicate that equity FDI is positively linked to political stability. Similarly, Globerman and Shapiro (2003) examine US FDI outflows for a broad sample of country recipients during the period 1995–1997 and find that voice, political freedom and political instability – among other facets of the political system of a host country – predict which countries are more likely to receive US FDI. Finally, Delios and Henisz (2003: 1162) show how an MNC tries to 'minimize [its] uncertainty by expanding into settings in which it is familiar with at least one (political or cultural) dimension of the institutional environment'. Extending these findings to the research on US MNCs' foreign location choice, we expect that a host country with a political system sharing similar values, norms and practices as the US will be more likely to be positively assessed by MNCs executives owing to its lower uncertainty, and hence will be more likely to become a potential foreign investment location. Therefore we propose:

Hypothesis 2a: Countries with the same political system as the US will be more likely to receive US MNCs' capital investments.

Comparative law scholars differentiate between civil and common law systems (Reynolds and Flores, 1989). The civil law tradition – the most widely spread around the world, encompassing French, German and Scandinavian legislation – draws on statutes and comprehensive codes as a primary means of ordering legal material, whereas the common law tradition – dominant in the Anglo-Saxon countries and former colonies – is based on judicial sentences on specific issues (La Porta *et al.*, 1998: 1118). Legal systems influence a myriad of different economic and social activities, such as business practices, compliance with the law, degree of protection of minority shareholders, tax regimes, financial market regulations and corporate control mechanisms. There is also research exploring the circumstances under which firms from countries with weak legal systems are likely to cross-list in the US contingent on their home legal system (Vaaler and Schrage, 2006).

Empirical research shows that when MNCs expand around the world, the host country legal system plays an important role in their operations abroad. For example, Globerman and Shapiro's (2003: 29) findings indicate that 'countries whose legal system are rooted in English common law are more likely to be recipients of US FDI flows'. Extending this previous research to foreign location choices, we expect that a potential host country with a legal system rooted in the common law system, like the US, will be more likely to be perceived as a favorably foreign location because it will entail more familiarity with the US MNC. Therefore we propose:

Hypothesis 2b: Countries with the same legal system as the US will be more likely to receive US MNCs' capital investments.

Recent reviews on the effects of culture in the field of IB (Leung *et al.*, 2005; Kirkman *et al.*, 2006) discuss the influence of national culture, usually constructed relying on Hofstede's (1983, 1997) four dimensions. The emphasis is placed on the differences in national cultural values between home and host countries and the potential consequences on cross-cultural management and international operations. There is extensive research demonstrating that national culture affects multiple facets of firms' international strategic decisions, such as entry modes (Kogut and Singh, 1998), franchising over management service contracts (Erramilli *et al.*, 2002), and the proportion of incentive-based compensation used for

subsidiary managers of host-country foreign affiliates (Roth and O'Donnell, 1996).

In terms of foreign location choices, the stage process of internationalization paradigm sheds significant light on the non-economic dynamics of location choice. It is argued that firms start their internationalization process entering their proximal countries, and only when enough knowledge is accumulated through the operation in that country do they expand their operations to more distant (in terms of psychic distance) countries (Johanson and Vahlne, 1977; Vahlne and Johanson, 2002). Even without taking this constringent step-by-step model, research drawing on the overall idea of adaptation to new cultural markets has empirically proved that MNCs tend to prioritize 'culturally proximate' countries when choosing the foreign locations of their new investments. For example, empirical evidence on the location choices of US FDI between 1977 and 1982 (Loree and Guisinger, 1995) shows that equity FDI is negatively linked to cultural distance. Li and Guisinger (1992) also find that cultural distance had a negative impact in the location choices of MNCs in Japan, Western Europe and North America during the period 1976–1986. The main argument provided for these negative relationships is the relative difficulty that foreign firms encounter when operating in national environments that follow a different set of norms and customs. Building on this previous research, we propose:

Hypothesis 2c: Countries culturally closer to the US will be more likely to receive US MNCs' capital investments.

In order to strengthen our assessment of the cultural factors influencing MNC location choice, we introduce trust as a complementary culture factor. National trust levels capture the degree to which MNC managers can rely on the business practices of local individuals. Wan and Hoskisson (2003) use this construct to explain firms' performance under different environmental contingencies, finding that munificent environments (a way of characterizing environments that encompasses political and legal institutions as well as societal characteristics such as trust) moderate the performance level of diversification strategies. Moreover, Knack and Keefer's (1997) research shows that countries' general level of trust facilitates the operation of firms, because societies with high levels of trust enhance impersonal business transactions. The enhanced national environment could differ-



entially affect the perceptions of MNCs' executives regarding uncertainty and the degree of additional informational capabilities required in any potential new environment. When the expectations of monitoring and reliance on third-party compliance are lower, then it is more likely that MNCs will prefer to operate in these host countries. We thus propose:

Hypothesis 2d: Countries with higher levels of trust will be more likely to receive US MNCs' capital investments.

To conclude, as in the case of the economic factors, we also expect a change in the relative weight of the cultural factors for MNC location choice over time. As argued by Dunning (1998), the increased MNC experience, knowledge and general exposure to different institutional and cultural environments during the last two decades suggest a reduction in the main effect hypothesized by the institutional-cultural variables. In other words, we expect host-country institutional and cultural variables to be less influential in MNCs' foreign location choices in 2000 relative to 1980, and we test this in our empirical analysis.

Combined influence of location choice determinants

There is agreement among IB researchers on the need to increase our efforts to explicitly bring together insights from the economic and institutional-cultural perspectives as a way to enrich our understanding of MNCs' foreign location choices (Dunning, 2001; Sethi *et al.*, 2003). We take on this task by introducing an overall conceptual framework, well established in economic sociology and institutional economics, that explicitly bridges the two perspectives.

Other fields of research (i.e., institutional economics and economic sociology) have shown the pivotal simultaneous influence of societal, political and cultural institutions on different market dynamics; however, within the IB literature, efforts to bridge the independently developed economic and institutional-cultural perspectives to explain foreign location choices are scarce. For instance, institutional economists (North, 1990) claim that without institutions (rules dictated by political, legal and societal institutions) stipulating the incentive and punishment arrangements country-wide, organizational transactions across country boundaries would become too costly. Economic

sociologists have also shown the importance of conceptualizing economic activity as strongly embedded in institutional-cultural factors, the main rationale being that market transactions are both constrained and enabled by social relations and social processes – what Granovetter (1985) referred to as the embeddedness of economic activity. In this line, DiMaggio and Zukin (1990) emphasized that embeddedness focuses broadly on stressing the cognitive, cultural, social and political influences over economic activity. In sum, there is extensive evidence proving that cultural and political institutions and processes shape distinct dynamics in the labor market (Peck, 1996), in the competitive behavior and performance of organizations (Uzzi, 1996, 1997) and in the constitution of markets (Fligstein, 1996), among others.

Research on the combined effects of economic and institutional-cultural processes has started to spill over into the IB literature, particularly regarding the study of MNCs' mode of entry (Brouthers and Brouthers, 2000; Meyer, 2001; Meyer and Peng, 2005). To our knowledge, Bandelj's (2002) is the only study on FDI *determinants* that combines both theoretical perspectives. Bandelj (2002) looks at FDI flows across central and eastern European transition economies between 1995 and 1997, and uncovers that economic and cultural ties between countries have strong positive effects on FDI flows. Bandelj's (2002) underlying logic is that cultural differences influence FDI flows as a consequence of investors' historically institutionalized perceptions.

We propose that institutional-cultural variables are likely to interact with economic variables during the decision-making process of MNCs' foreign location choice. We have previously hypothesized main effects for market size and cultural differences independently; now we redirect our attention to assess whether stronger effects might be expected for specific combinations of market size and national cultural differences. Whether one argues that this stronger effect is a consequence of the lower expected transaction costs in more similar countries, or whether it is attributed to investors' historically and culturally institutionalized cognitive preferences for certain countries, both mechanisms point to the same integrated outcome. Based on these arguments, we argue that culturally and institutionally proximate countries will likely moderate the effect of market size on the likelihood of US MNCs investments, in a way that the more similar countries will have a

more positive effect on the levels of US MNCs. Hence we formally propose:

Hypothesis 3: Institutional-cultural factors moderate the relationship between market size and the likelihood of US MNCs' foreign investment, such that countries with large markets and with similar institutional-cultural environments will be more likely to receive US MNCs' capital investments.

Method

Data source

We collected archival data on the foreign location choices of the largest 100 US MNCs ranked by revenues (Fortune 500) in 1980 and 2000. We had two goals in mind. First, we looked at whether this sample of US MNCs had changed their foreign location choices after 20 years, and second, we analyze whether the MNCs' rationale for choosing foreign locations has varied in this period by looking at the economic and institutional-cultural traits of host countries, controlling for important MNCs' characteristics. The 100 largest US MNCs represented US\$3.1 trillion dollars in combined assets and employed more than 6.5 million individuals in 2000. They cover 27 different two-digit SIC industry codes, from oil and gas exploration to office equipment and photography. The largest firm in our sample (Exxon-Mobil) had US\$149 billion dollars in assets and 123,000 employees. The smallest (Quaker Oats) had US\$2.4 billion dollars in assets and 21,000 employees.

Variables

Dependent variable

Our dependent variable, *foreign location choice*, is a dichotomous variable that captures whether a US MNC has substantial direct capital investment in a given country. These data are obtained from the *Directory of American Firms Operating in Foreign Countries* (1981, 2001), which includes all major US firms' investments abroad. Foreign US MNC investments are defined as those

in which American firms have a substantial direct capital investment and which have been identified by the parent firm as a wholly or partially owned subsidiary, affiliate or branch. Franchises and non-commercial enterprises or institutions, such as hospitals, schools, etc., financed or operated by American philanthropic or religious organizations are not included. (Angel, 2001: i)

This operationalization of US foreign location choice allows us to address, at least partially,

some of the criticisms of drawing on sales as an overarching measure to capture MNC activities overseas (Clark *et al.*, 2004; Dunning *et al.*, 2007).

US firms in our sample had on average substantial direct capital investment in 22.9 countries in 1980 and 28.9 countries in 2001. The total number of substantial foreign capital investments for the 100 MNCs was 2288 and 2891 in 1980 and 2000, respectively, showing an increase of 26%. Within our sample of MNCs, IBM had the higher number of foreign wholly or partially owned subsidiaries, affiliates or branches in 1980 (80 countries), and Xerox (108 countries) in 2000. Finally, there are a total of 147 host countries¹ in our data set that received substantial direct capital investment from one or more of the largest US MNCs in either 1980 or 2000. The countries are listed according to different regional categories in the Appendix. Australia, Canada and the United Kingdom were the three countries with the largest number of direct capital investments from the 100 largest US MNCs in 1980 (with an average presence of 81 companies), and Canada, the United Kingdom and Japan were the respective countries in 2000 (with an average presence of 84 companies).

Independent variables

We consider two sets of independent variables: those related to host-country variables considered within the economic perspective and those related to the institutional-cultural perspective. Within the economic perspective, we operationalize host-country market size in terms of two constructs: affluence and magnitude. The gross domestic product (GDP) in billions of current US dollars measures affluence in each year, and magnitude is measured by the total number of inhabitants of a given country in millions of individuals (*Population*) in each year. Both variables were collected from the World Development Indicator (WDI) for 1980 and 2000.

Previous studies have used different proxies to estimate the *physical infrastructure* level of host countries. For instance, Cheng and Kwan (2000) used three indicators: the ratio of total km of roads to the country's area expressed in km;² a similar indicator that considered only high-grade paved roads and the ratio of the total km of railway over the country's area, expressed in km². Root and Ahmed (1978) employed the ratio of commerce, transport and communication to GDP, while Loree and Guisinger (1995) derived a composite proxy by

running a factor analysis of more than 20 variables such as number of radios, civil air traffic, number of telephones and others. Since our data set comprises a large number of countries (147), and we sought reliable and consistent information for 1980 and 2000, we choose as a measure of physical infrastructure the total number of phone lines per thousand inhabitants as reported by WDI for 1980 and 2000.

We used as source for *wages* data the International Labour Organization (ILO). We calculated the average wages received by manufacturing workers who work 40 h a week in 1980 and 1990. Then we transformed the local currency to US dollars according to the exchange rate provided by WDI for 1980 and 2000. Unfortunately, availability of data decreases the host-country sample size (to 83 countries) as well as the number of US investments in these countries (to about 12, 000).

In order to assess the influence of the institutional-cultural factors in the host country on US location choice we relied on five different variables. The operationalization of *political institutions* has received quite a bit of attention in the IB literature. For example, Loree and Guisinger (1995) used a composite index heavily weighted toward political risk. Globerman and Shapiro (2003) were more comprehensive, relying on six indexes created by Kaufmann *et al.* (1999), such as political freedom and political stability, among others. However, they note that, given the high correlation among these indicators, they also create a summary measure according to a principal component technique. Since we have a large sample of countries, we decided to use a rather simple yet powerful measure. We measure a political system on the basis of whether it is a democracy or not (1=democracy; 0=otherwise). Our source for this variable is the *CIA-World Fact Book*. To measure *legal systems* we followed the standard convention in the IB literature and coded those host countries belonging to the same legal family as the US (common law) as 1 and otherwise 0. The source of this variable is Reynolds and Flores' (1989) classification according to the origin of national commerce and corporate legal codes.

Within the institutional-cultural set of variables, the next two variables are more culturally oriented. First, for our *cultural distance* measure, we draw on Kogut and Singh's (1998) multidimensional measure, which estimates the national cultural difference between the US and the host country based on Hofstede's (1983) four cultural dimensions.

Algebraically, this is estimated following the next equation:

$$CD_j = \sum_{i=1}^4 \left[\frac{(I_{ij} - I_{iu})/V_i}{4} \right] \quad (1)$$

where I_{ij} is the index for the i th cultural dimension and j th country, V_i is the variance of the index of the i th dimension, u indicates the United States, and CD_j is the cultural distance proxy of the j th country from the United States.

Since this specific proxy for national cultural distance has received significant criticisms (Shenkar, 2001; Brouthers and Brouthers, 2001; Leung *et al.*, 2005; Kirkman *et al.*, 2006), we decided to amend some of the limitations of Kogut and Singh's (1998) measure by incorporating Shenkar's (2001) suggestions. This entailed including a series of controls (geographical distance, language, level of development, and market and company size) each time we estimate the influence of cultural distance on US foreign location choice.

Finally, in order to add robustness to our assessment of national cultural differences, we draw on the World Values Survey (<http://www.worldvalues-survey.org/>) to construct an overall indicator of the society-wise general *trust* levels. We follow Knack and Keefer (1997) in using as trust indicator the responses to the question 'Generally speaking, would you say that most people can be trusted, or that you can't be too careful in dealing with people?' The indicator chosen is the percentage of respondents in each nation responding: 'Most people can be trusted' (after deleting the 'don't know' responses).

Control variables

Firm and industry level We consider three main measures capturing the potential influences of MNCs' characteristics in their foreign location choices. The three measures were obtained from *Fortune Magazine* (1980, 2001). *Firm size* is operationalized as the total number of employees, *firm performance* is assessed according to the total return to investors in the previous 10 years, and *firm industrial sector* is operationalized through an industrial two-digit SIC coding scheme. We transform the industrial sector coding scheme into a series of dummies to include in our estimating models: each industry code has one dummy that takes value 1 for those firms operating mainly in this industry and 0 for those firms

outside this given industry. Finally, we created a series of *firm dummies* in order to capture all the unobserved differences among the firms in our sample that might influence their foreign location choices. In this way, each of the 100 firms has a unique dummy that takes the value 1 for the investments made by the corresponding firm in a particular country and 0 for all the other investments made by other firms.

Country and regional level In order to incorporate Shenkar's (2001) advice, we include among our control variables a dummy representing the official *language* for each host country (1=English; 0=otherwise), which we obtain from *CIA-World Fact Book*. Additionally, we also decided to take into account *geographical distance* as a control in our analyses, trying to be receptive to warnings highlighted by several scholars when testing hypotheses related to cultural distance (Shenkar, 2001; Brouthers and Brouthers, 2001; Harzing, 2004; Leung *et al.*, 2005; Kirkman *et al.*, 2006). Shenkar (2001), in particular, notes that the results obtained using this difference construct might be influenced by other sets of covariates (one of them being geographical distance) usually not included in the models.

We follow previous research that has measured this variable as the physical distance between the capital of the home country and the capital of the host country (e.g., Balabanis, 2000). Hence geographical distance is measured by the distance, in thousands of miles, between Washington, DC, and the capital of each host country according to *Great Circle Distances Between Capital Cities* (Eden, 2006). We created a dummy variable for all the *new countries* that had emerged since 1980 (e.g., demise of the USSR, Yugoslavia, etc.) (1=new country in 2000 that did not exist in 1980; 0=country existed in 1980). We also included in our analyses two other sets of dummy variables that account for potential differences in country location preferences. These are the *regional location* of the host country and the level of *economic development* of each of these countries. In accounting for potential regional effects, we used the previously described 19 UN regional categories, where each region has a unique dummy that takes the value 1 for those countries inside that particular region and 0 for those countries outside. The country economic development dummy was created and introduced in the models to mitigate some of the limitations of the cultural distance variable, and for its own interest.

They were developed using the categorization used by the International Monetary Fund (2006), and were coded 1 if the country was considered economically developed and 0 otherwise.

Estimation

We built a panel data set that contains the presence (or the lack) of US MNCs investments for each company in our sample in each of the countries where they existed in 1980 and 2000. Given that our sample includes the 100 largest US MNCs in two points in time, and that these companies chose to locate their foreign investment in 147 different countries, our panel data consist of 29,400 Country × Company observations. Owing to the dichotomous nature of our dependent variable, as well as the unknown nature of the level of correlation between the data in the chosen points in time, we use a panel *general estimating equation*² (GEE) technique (Hardin and Hilbe, 2002; Stata, 2006). GEE offers a number of advantages for modeling correlated data, 'allowing for a range of substantively motivated correlation patterns within clusters' (Zorn, 2001), while accepting an interpretation of those estimates identical to that for commonly used models for uncorrelated data, such as logit or probit models (Zorn, 2001).³ Taking into account this estimation technique and our previous description of the dependent and independent variables for evaluating the country-level determinants of the foreign location choices of US MNCs investment, our estimation is based on the following equation:

$$\begin{aligned}
 Y_{ijt} = & \beta_0 + \beta_1 FirmSize_{it} + \beta_2 FirmPerformance_{it} + \beta_3 Language_{jt} \\
 & + \beta_4 NewCountryDummy_{jt} + \beta_5 Geog.Distance_{jt} + \beta_6 EconVar_{jt} \\
 & + \beta_7 IntCultVar_{jt} + \sum_{z=0}^1 \phi_z DevDum_{jt} + \sum_{z=1}^{18} \phi_z RgDum_{jt} \\
 & + \sum_{z=1}^{17} \phi_z IndDum_{it} + \sum_{z=1}^{99} \phi_z FirmDum_{it} + \mu_{ijt} \quad (2)
 \end{aligned}$$

where the subscripts indicate: *i* = company id for each of the 100 US MNCs in our data set; *j* = country id for each of the 147 countries chosen by these 100 MNCs; and *t* = 0 or 1, representing 1980 and 2000, respectively.

The dependent variable, *Y_{ijt}*, takes on values 0 or 1 depending on the presence (or lack) of capital investment coming from company *i* in country *j* at time *t*. The independent variables of interest are grouped in this equation, as discussed in our theoretical arguments, into two groups of



drivers/factors: *EconVar* (economic variables) and *IntCultVar* (institutional-cultural factors). More specifically, they represent host-country characteristics, such as GDP, Population, Physical infrastructure and Wage levels for the economic variables (*EconVar*). *IntCultVar* is a short expression specifically describing the variables linked to the institutional-cultural aspects of the host country, such as the political and legal systems, cultural distance and the overall level of trust. The other variables represent controls used in our estimations.

Results

Table 3 presents descriptive statistics for the main variables used in our analyses. Unfortunately, due partly to our large set of countries under consideration (147) and partly to limitations that the IB field might need to tackle more seriously (more on this later), we were able to collect a reduced amount of information for some country-level variables (wage, trust, cultural distance). Therefore our analyses are presented in separate models that are described below. Tables 4–6 show the results of testing all our Hypotheses 1 and 2. It is important to highlight here that all the models presented in Tables 4 and 5 contain firm, industry, regional and even economic development variables as dummies. The inclusion of these set of dummies strengthen significantly the robustness of our analyses (more details in note 2).

Our stepwise estimating procedure started with our baseline model (Model 1), where we included all control variables and dummies. Model 1 shows that firm size, same language (English), and being a new country (being created after 1980) have a positive and significant coefficient, which we interpret as a higher likelihood of making foreign investments for those larger companies. Models 2a and 2b in Table 4 test our first set of hypotheses linked to the economic drivers (H1a–H1c). As noted before, Model 2b in Table 4 introduces host country wages to the former model, although reducing substantially our sample size, and reports a positive and significant relationship on the effect of wages on the likelihood of receiving US MNCs' foreign capital investment. This implies that our hypothesis H1d does not find support for this smaller set of countries.

Models 3a and 3b in Table 4 test the empirical evidence for our hypothesized institutional-cultural hypotheses. We examine these hypotheses in two stages as a consequence of the limited coverage on the cultural distance and countrywide levels of trust. Model 3a shows significant and positive

support for our predictions regarding political institutions (H2a)⁴ and legal institutions (H2b). Model 3b includes our two incompletely covered ($N=12,342$) cultural variables (trust and cultural distance). For this reduced set of countries, we find support in the predicted direction for each of the cultural hypotheses (H2c and H2d).

Models 4a and 4b in Table 4 show the combined effect of both sets of arguments, including all the variables from each perspective. Model 4a combines the economic and institutional variables for which we have complete coverage for the 147 countries in our sample. Model 4b depicts the combination of all variables, but for a reduced set of countries ($N=8481$). These models confirm that both perspectives are strongly supported in our data set, without losing significance when including the set of variables from each perspective. Specifically, we can see that country-level characteristics of the host country, such as GDP, Population, Physical infrastructure (from the economic paradigm) and similarities in Political and Legal institutions, and Cultural distance (from the institutional-cultural perspective) are significantly associated with the likelihood of US MNC foreign capital investments. It is important to highlight here also the consistent significant and positive effect found for a dummy variable accounting for those countries that became independent from 1980 to 2000.

In order to test our arguments regarding the interaction between these two sets of drivers, as well as the relative shift in the importance of each of them from 1980 to 2000, we develop Tables 5 and 6. Table 5 collects information regarding this interaction for those variables with complete coverage for the 147 countries (economic and institutional). Table 6 depicts the same analyses for those variables with reduced coverage (economic and cultural). Specifically, Model 5 in Table 5 illustrates the baseline, where all the controls and main effect for both arguments are shown. Model 6 examines the temporal shift in the relative importance of each of these arguments from 1980 to 2000. It shows a significant and negative coefficient for GDP and political institution, as well as a significant and positive coefficient for Population, while the other interactions are not significant. These results can be interpreted as a reduced influence of GDP and political institutions over the likelihood of foreign capital investments from US MNCs from 1980 to 2000. Model 7 in Table 5 examines the moderating effect (Baron and Kenny, 1986) of the institutional-cultural variables over the economic

Table 3 Descriptive statistics for main variables

Variable	Mean	s.d.	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Capital investment	0.18	0.38	1.00												
2. Firm size	65×10^3	82×10^3	0.10***	1.00											
3. Firm performance	11.2	9.6	0.01	-0.02**	1.00										
4. Language	0.34	0.47	0.01	0.00	0.00	1.00									
5. New country	0.08	0.27	-0.03***	-0.00	0.09***	-0.21***	1.00								
6. GDP	102.0	326.1	0.33***	-0.00	0.04***	-0.08***	0.01	1.00							
7. Population	33.2	119.2	0.12***	-0.00	0.01*	0.00	-0.03***	0.28***	1.00						
8. Physical infrastructure	147.0	182.6	0.32***	-0.00	0.10***	-0.03***	0.18***	0.39***	-0.06***	1.00					
9. Wages	4.67	4.88	0.29***	-0.00	0.05***	-0.08***	-0.13***	0.42***	-0.15***	0.83***	1.00				
10. Political institutions	0.54	0.50	0.21***	-0.00	0.12***	0.13***	0.13***	0.17***	0.01	0.39***	0.26***	1.00			
11. Legal institutions	0.34	0.47	0.12***	-0.00	0.02**	0.61***	-0.13***	0.08***	0.04***	0.07***	-0.03**	0.28***	1.00		
12. Geographical distance	5.53	2.16	-0.08***	0.00	-0.00	0.26***	-0.06***	-0.05***	0.11***	-0.20***	-0.25***	-0.16***	0.23***	1.00	
13. Cultural distance	2.81	1.33	-0.14***	0.00	0.00	-0.05***	-0.11***	-0.12***	0.00	-0.35***	-0.42***	-0.10***	-0.10***	-0.04***	1.00
14. Trust	0.29	0.16	0.10***	-0.00	-0.00	-0.03***	-0.13***	0.17***	0.21***	0.36***	0.48***	0.10***	-0.05***	0.11***	-0.18***

* $P < 0.05$; ** $P < 0.01$; *** $P < 0.001$

variables as discussed in our framework (H3). Significant coefficients for the interactions between economic (population) and institutional variables (political and legal institutions) in general support our Hypothesis 3. However, it is important to note here that the moderation between economic and institutional variables might be more complex than we have argued. As shown by Model 7, while the interaction coefficient between population and political institution is significant and positive, as predicted by H3, the corresponding coefficient for population and legal institutions is significant and negative, even when the main effect remains significant and positive for each variable separately.

Finally, as noted before, Table 6 repeats the previous analyses but for a reduced set of countries where information about national culture is readily available. Model 8 depicts a test for this reduced set of countries of the shifting influence of the variables from both drivers from 1980 to 2000. Contrary to the same test with the whole sample, here the corresponding coefficients for the cultural and institutional variables are not significant. On the contrary, the coefficients for the economic variables remain significant, and with the same signs shown in Model 6 (negative for GDP and positive for Population and Physical infrastructure). Model 9 again tests the hypothesized moderating effect of cultural variables over the economic variables (H3) for this reduced set of countries ($N=12,155$). Consistent with our findings in Model 7, in general terms our argument seems to be supported, given the significant coefficients for both cultural proxies (cultural distance and trust). However, again, it is important to emphasize that the signs of these coefficients have to be reviewed with caution, given the reduced size of the sample of countries for which cultural variables can be readily collected.

Conclusion and discussion

This paper sought to explore whether the foreign location choices of a particularly relevant set of MNCs have changed during a period when the globalization process has arguably intensified, and what host-country-level factors influencing these MNCs' location choices are. These two research questions are relevant to IB research as noted by Dunning (1998) and Buckley and Ghauri (2004), because the geographical spread of MNC activities has great impact on the world economy.

Our analyses show that, overall, US MNCs have geographically expanded their international capital

Table 4 US MNCs' foreign capital investment (panel general equation estimation/probit)

Variable	Hypotheses	Model 1	Model 2a	Model 2b	Model 3a	Model 3b	Model 4a	Model 4b
Firm size		$9.7 \times 10^{-7***}$ (1.9×10^{-7})	$9.9 \times 10^{-7***}$ (2.1×10^{-7})	$1.1 \times 10^{-6**}$ (3.4×10^{-7})	$9.8 \times 10^{-7***}$ (2.0×10^{-7})	$1.3 \times 10^{-6***}$ (2.9×10^{-7})	$1.0 \times 10^{-6***}$ (2.1×10^{-7})	$1.4 \times 10^{-6**}$ (4.7×10^{-7})
Firm performance		0.002 (0.001)	0.005** (0.002)	0.002 (0.002)	0.002 (0.001)	0.004* (0.002)	0.005** (0.002)	0.004 (0.002)
Language		0.10** (0.03)	0.17*** (0.03)	0.43*** (0.05)	-0.07 (0.04)	0.41*** (0.06)	0.01 (0.03)	0.40*** (0.08)
New country		0.27*** (0.04)	0.43*** (0.05)	0.26** (0.09)	0.19*** (0.04)	0.27*** (0.06)	0.33*** (0.05)	0.12 (0.11)
Geographical distance		0.03 (0.02)	0.04* (0.02)	0.09** (0.02)	-0.004 (0.02)	-0.20*** (0.02)	-0.01 (0.02)	-0.10* (0.04)
GDP	H1a (+)		$9.7 \times 10^{-4***}$ (1.6×10^{-4})	$8.6 \times 10^{-4***}$ (1.3×10^{-4})			$9.4 \times 10^{-4***}$ (1.6×10^{-4})	$8.5 \times 10^{-4***}$ (1.1×10^{-4})
Population	H1b (+)		0.0015*** (1.4×10^{-4})	0.0014*** (1.4×10^{-4})			0.0015*** (1.5×10^{-4})	0.0016*** (1.7×10^{-4})
Physical infrastructure	H1c (+)		$7.1 \times 10^{-4***}$ (1.2×10^{-4})	3.5×10^{-4} (1.9×10^{-4})			$8.7 \times 10^{-4***}$ (1.1×10^{-4})	$5.4 \times 10^{-4*}$ (2.6×10^{-4})
Wages	H1d (-)			0.02** (0.008)				0.007 (0.01)
Political institutions	H2a (+)				0.15*** (0.03)	0.38*** (0.05)	0.20*** (0.03)	0.57*** (0.06)
Legal institutions	H2b (+)				0.33*** (0.03)	0.14** (0.04)	0.28*** (0.03)	0.43*** (0.05)
Cultural distance	H2c (-)					-0.14*** (0.02)		-0.07** (0.02)
Trust	H2d (+)					1.32*** (0.15)		0.54* (0.22)
Year (2000)		0.21*** (0.02)	-0.07* (0.03)	-0.16** (0.05)	0.15*** (0.03)	0.14*** (0.03)	-0.17*** (0.04)	-0.24*** (0.07)
Constant		-0.56*** (0.14)	-1.17*** (0.14)	-1.46*** (0.20)	-0.40** (0.14)	0.16 (0.19)	-1.02*** (0.14)	-0.61* (0.26)
Wald χ^2		4715***	4728***	2652***	4750***	3072***	4786***	2213***
N		27,489	27,302	11,913	27,489	12,342	27,302	8481

* $P < 0.05$; ** $P < 0.01$; *** $P < 0.001$. Values in parentheses represent semi-robust standard errors.

All models include region, industry, firm and economic development dummies (see note 2 for a detailed discussion).

Table 5 US MNCs foreign capital investment: interaction models

Variables	Model 5	Model 6	Model 7
Firm size	1.0 e−6*** (2.1 e−7)	1.0 e−6*** (2.1 e−7)	1.0 e−6*** (2.0 e−7)
Firm performance	0.005*** (0.002)	0.002 (0.002)	0.002 (0.001)
Language	0.014 (0.04)	0.07* (0.04)	0.08* (0.04)
New country	0.33*** (0.05)	0.34*** (0.05)	0.33*** (0.05)
Geographical distance	0.007 (0.02)	0.011 (0.02)	−0.02 (0.02)
GDP	9.4 e−4*** (1.6 e−4)	0.002*** (1.3 e−4)	0.002*** (1.3 e−4)
Population	0.0015*** (1.5 e−4)	9.0 e−4*** (1.5 e−4)	7.3 e−4*** (1.7 e−4)
Physical infrastructure	8.5 e−4*** (1.1 e−4)	9.5 e−4*** (2.3 e−4)	0.001*** (2.3 e−4)
Political institutions	0.20*** (0.03)	0.25*** (0.04)	0.08* (0.04)
Legal institutions	0.28*** (0.03)	0.28*** (0.04)	0.43*** (0.04)
GDP × 2000		−0.001*** (1.5 e−4)	−0.001*** (1.4 e−4)
Population × 2000		9.0 e−4*** (1.7 e−4)	8.3 e−4*** (1.7 e−4)
Physical infrastructure × 2000		0.000 (0.001)	0.000 (0.001)
Political × 2000		−0.17** (0.06)	−0.20** (0.06)
Legal × 2000		−0.05 (0.04)	−0.03 (0.04)
Population × Political institutions			0.006*** (5.5 e−4)
Population × Legal institutions			−0.006*** (5.6 e−4)
Year (2000)	−0.17*** (0.04)	0.03 (0.05)	0.04 (0.05)
Constant	−1.02*** (0.14)	−1.20*** (0.14)	−1.03*** (0.14)
Wald χ^2	4,786***	4,956***	5,013***
N	27,302	27,302	27,302

* $P < 0.05$; ** $P < 0.01$; *** $P < 0.001$. Values in parentheses represent semi-robust standard errors.

All models include region, industry, firm and economic development dummies (see Note #2 for a detailed discussion).

investments, if one compares their location choices in year 2000 relative to 1980, as shown in Tables 1 and 2. Our findings reveal that this foreign expansion has gone beyond the original Ohmae (1985) TRIAD regions, and even beyond the new Rugman and Verbeke (2004) regional TRIAD as shown in Table 2. Our results in Table 1 and 2, comparing how different regional categorizations impact on our research question, also show a need to better conceptualize regional world classifications (Aquilera *et al.*, forthcoming; Vaaler *et al.*, 2007). Interestingly, by using a fine-grained categorization of regions (that of the UN), we are able to uncover two MNC internationalization patterns neglected in IB research. First, we find that MNCs withdrew from certain regions (e.g., Central America and Africa, as shown in Table 1c) in this period. Second, the geographical expansion of MNC activities is targeted beyond eastern Asia, encompassing countries rich in natural resources, such as those in western Asia, and dynamic emerging markets in south-eastern Asia.

We believe that our findings regarding change in the location choice in this period speak to the globalization–regionalization debate by showing, on the one hand, that the TRIAD countries continue to be important, supporting the regionalist arguments. However, on the other hand, our findings also reveal that regions outside the TRIAD have become more attractive MNC locations in 2000, which undermines the regionalists' predictions. Yet it is fair to note that our findings do not provide full support for an evenly spread globe expansion of MNC activities, because we find that some regions, such as South America and Africa, remain relatively less attractive host countries. Taking these findings together, we propose that it is time to leave behind the globalization–regionalization debate, given its overemphasis on ontological discussions, and turn to studying more empirically driven questions. For example, IB scholars should study the choices and consequences of MNC location preferences for firms operating in a changing global market and for host countries seeking to attract FDI. This also suggests

Table 6 US MNCs foreign capital investment: interaction models

Variables	Model 8	Model 9
Firm size	1.4 e-6*** (3.3 e-7)	1.4 e-6*** (3.3 e-7)
Firm performance	0.004* (0.002)	0.005* (0.002)
Language	0.57*** (0.07)	0.53*** (0.06)
New country	0.43*** (0.09)	0.67*** (0.09)
Geographical distance	-0.22 (0.03)	-0.20*** (0.03)
GDP	0.002*** (1.2 e-4)	0.002*** (1.2 e-4)
Population	2.3 e-4 (1.9 e-4)	0.005*** (7.3 e-4)
Physical infrastructure	-1.6 e-4*** (3.4 e-4)	1.1 e-4 (3.4 e-4)
Political institutions	0.34*** (0.06)	0.31*** (0.06)
Legal institutions	0.17*** (0.05)	0.17** (0.06)
Cultural distance	-0.09*** (0.02)	-0.11*** (0.02)
Trust	1.41*** (0.22)	1.84*** (0.22)
GDP × 2000	-0.001*** (1.3 e-4)	-0.001*** (1.3 e-4)
Population × 2000	0.001*** (2.2 e-4)	0.001*** (2.1 e-4)
Physical infrastructure × 2000	9.6 e-4*** (2.7 e-4)	0.001*** (2.7 e-4)
Political × 2000	0.15 (0.11)	0.12 (0.12)
Legal × 2000	-0.10 (0.07)	-0.04 (0.07)
Cultural distance × 2000	0.06 (0.02)	0.06 (0.02)
Trust × 2000	-0.14 (0.22)	0.011 (0.22)
Population × Cultural distance		0.002*** (1.7 e-4)
Population × Trust		-0.019*** (1.9 e-4)
Year (2000)	-0.41*** (0.14)	-0.53*** (0.14)
Constant	-0.26* (0.19)	-0.61** (0.20)
Wald χ^2	3,340***	3,324***
N	12,155	12,155

* $P < 0.05$; ** $P < 0.01$; *** $P < 0.001$. Values in parentheses represent semi-robust standard errors.

All models include region, industry, firm and economic development dummies (see Note #2 for a detailed discussion).

that IB scholars should give more attention to regions outside the TRIAD: for example, why there has been a *de-location* of US MNC activities from Africa at the same time as an increase in the OPEC countries?

The host-country-level determinants of US MNCs' location choice is the second question tackled in this paper. In this regard, our findings highlight the power of an integrative framework considering both economic and institutional-cultural arguments in explaining foreign location choice independently, as well as when they are taken simultaneously. We believe that our findings represent an important contribution to the location choice literature as they significantly enrich the explanation of MNCs' actions.

More specifically, we uncover the following foreign location choice patterns. First, in contrast with previous research within the economic perspective, we find that both a country's GDP and its population independently explain MNCs' foreign location choice. However, when we compare these

two market-size variables in the 20-year period, we find that, while GDP has become less important in predicting the likelihood of being the recipient of US investments, population has become more important in 2000 (relative to 1980). This finding speaks directly to our prediction based on Dunning's (1998) argument regarding the increasing relevance of market size factors as drivers of MNC location choice. Yet we are able to discern that population has turned out to be a critical factor. This is consistent with the shift in MNC strategies for new markets noted by Prahalad and Lieberthal (2003), who suggest that MNCs should target countries with large population regardless of the per capita income.

Second, we show that national institutional-cultural *dissimilarities* between home and host country negatively influence the likelihood of a US MNC's capital investment. This is nontrivial, given that our sample encompasses the largest US MNCs, which supposedly have the greater international expertise. In addition, when we compare the

institutional-cultural influence in 1980 and 2000, we find only limited support of Dunning's (1998) argument that MNCs have become less susceptible to institutional-culture effects over time. Hence we conclude that, even in the face of globalization trends, with countries looking more homogeneous (Heuer *et al.*, 1999), there is a continued importance of learning across cultures and institutions in international operations.

A third, slightly counterintuitive yet interesting result of our analyses is the significant and positive coefficient for the effect of wages on MNCs' location choices, indicating that US MNCs are more likely to choose foreign locations with high wages, controlling for the other economic factors. This result suggests that the commonly claimed offshoring operations' argument, as a main driver of outward FDI, is not confirmed in our US MNC sample. We must note, however, that we test this hypothesis in a smaller sample (83 countries as opposed to 147; see Table 4); yet it still includes classically defined low labor cost destinations such as Singapore, India and China.

An overarching lesson coming from our analyses is the need to enrich our conceptual frameworks with variables originating at different levels of analysis. Hence, in all our models, we include firm-level variables (size, performance and firm dummies), industry-level variables (dummies) and country-level variables (regional and economic development dummies), which are consistently significant predictors. This suggests that future research should continue to account for variables at different levels of analysis to increase the external validity.

The fluctuation of the 2000-year dummy is also worth discussing. Its positive effect indicates that the likelihood of finding a US foreign capital investment in a given country increases in 2000 relative to 1980. Interestingly, as shown in Table 4, we find only negative coefficients for this dummy in the models where the economic variables are included (Models 2a, 2b, 4a and 4b). We interpret this pattern as an indication that MNCs' foreign investments have only matched the economic growth of the world. If we could 'discount' that growth, and look at the world in the year 2000 with an economy of the size of the world in 1980, US MNCs would in fact have reduced their international exposure. This is not a trivial scenario. Thus we suggest that this finding could imply that MNCs have strong resource constraints or risk caps beyond which they are reluctant or incapable of

passing. The next step in this direction would be to study MNCs' activities over an extended recessive period and test whether this overall negative impulse affects foreign location choices. Finally, our findings provide overall support for our proposed moderating effect of institutional-cultural variables as well as their change over time. This suggests that future researchers would be well advised to consider these interaction effects in addition to the main effects of both economic and institutional-cultural variables.

Our study suffers from some limitations, which we would like to note. First, our data set encompasses a unique set of MNCs with headquarters in the US, so our results are not readily generalizable to the entire population of MNCs. However, US MNCs represent a fairly large population, since they consistently hold nearly 14% of the world's GNP, have between 30% and 50% of world MNCs' sales, and control 62 of the 100 most valuable brands in the world, including the top five (Ghemawat and Ghadar, 2006). Future studies could test the face validity of our findings by replicating our model for MNCs whose headquarters are located in other economically advanced countries, such as European MNCs. Alternatively, future research could even go further and test whether MNCs from developing or emerging countries are likely to follow similar patterns of location choice to the ones that we propose.

A second limitation in our study is that we cover two points in time, instead of adopting a longitudinal approach. Unfortunately, we are constrained by our main source of data, which was not originally published every year. Data on MNC foreign locations are becoming more readily available, so hopefully future research could expand our research design and study these processes in a longitudinal fashion. Finally, future research could also extend our work by exploring not only location choice but also types of foreign mode of entry. There is some theoretical and empirical evidence that, during the period that we analyze, MNCs were especially prone to use other modes for internationalizing their operations, such as international joint ventures or strategic alliances with local firms. Extending our findings to capture commonalities and differences among all the possible ways in which MNCs choose to extend their operations to foreign countries and particularly focus on the determinants of location choice appears academically relevant.

In sum, we believe that this paper contributes to the IB field by looking at the change of foreign



location of US MNCs in two periods of time, and by examining the country-level factors determining these location choices from the economic and institutional-cultural perspectives independently and their combined effects.

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Notes

¹We have a few exceptions to the overarching definition of host countries in our sample. First, some territories were chosen by US MNCs but are not included in our data set, mainly because they do not have a sovereign political status. These territories are: Bermuda and Cayman Islands (overseas territories of the United Kingdom); Madeira (region of Portugal); Reunion (overseas Département of France); and the Ryukyu or Nansei Islands (prefecture of Japan). A second exception is the cases of Taiwan (Republic of China), Hong Kong and Macao. These non-sovereign territories were included in our analysis for multiple reasons. In the case of Hong Kong and Macao, we consider they deserve a special treatment due to their strategic role in commerce in east Asia in the last century, as well as their recent change of status from colonies of the United Kingdom and Portugal to become special administrative regions of the People's Republic of China in 1997 and 1999 respectively. In the case of Taiwan, being among the largest economies in the world, a key center of economic activity in east Asia, and having achieved the status of advance economy, its exclusion would likely substantially reduce the comprehensiveness of our conclusions.

²Before testing our hypotheses with more sophisticated tools, we decided to perform some basic regression models to gain a preliminary sense of

the validity of our hypotheses, as well as how much variance in the dependent variable is explained. Following a stepwise methodology, and a panel ordinary regression estimator (XTREG), we found the overall explained variance on the dependent variable (foreign capital investments) was 0.9% when firm size and firm performance were included. This value grew to 4% when we added industry dummies. Also, when we included a set of 100 dummy variables for each firm in our sample, the overall variance explained rose to 9%. This means that, considering the limits and problems of estimating this dependent variable with an ordinary regression technique, firm-level differences would explain only 9% of the variance in the foreign capital investment choices of this group of companies. Including regional dummies as well as economic development dummies, the variance explained rose to 11%. When all country-level variables (our main focus in this paper) were included in the model the total variance explained grew to 43%. This seems to be an early confirmation of our arguments on the relative importance of country-level factors in comparison with firm-level variables when explaining foreign location choices. Replicating this preliminary analysis, but now using a more accurate estimator (probit), we find the pseudo R^2 values show the same overall trend. When all the firm-level variables were included, pseudo R^2 reached 9.6%. In contrast, when all the country-level variables were included, pseudo R^2 grew to 49.7%.

³As noted in the data and method section, we choose to test our hypotheses more accurately by relying on a general equation estimator (GEE; Hardin and Hilbe, 2002), specifically using Stata's (2006) panel general equation estimator (XTGEE). Considering the dichotomous nature of our dependent variable we decide to specify this panel model with a binomial family and probit link according to the *Cross-Sectional Time Series Stata* manual. Also, to minimize heteroskedasticity problems, we use in each of our models the ROBUST option (which follows a Huber-White sandwich estimator of variance) as a way of estimating the standard errors in a conservative way (wider error intervals around the coefficients mean). It is important to note that in each of these models we have included a whole set of control variables that are not explicitly shown in the tables (though they are mentioned in the explanatory note at the bottom of each table). These control variables are a set of dummy variables accounting for unobserved differences of firms and industry (at the firm level) as well as regional and economic development dummies as country-level controls.



⁴For robustness purposes, we have also operationalized the political system variable using the political

constraint construct that Henisz (2000) and our results are consistent. We thank Reviewer 2 for this suggestion.

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Appendix

List of countries by type of regional category (N=147)

See Tables A1–A3.

Table A1 Ohmae's (1985) TRIAD regional category

Region	Countries
Europe (8)	Belgium, Denmark, France, Germany, Ireland, Italy, Luxembourg, Netherlands, United Kingdom
Japan (1)	Japan
North America (2)	Canada, Mexico
Outside the TRIAD (136)	Albania, Algeria, Angola, Argentina, Australia, Austria, Azerbaijan, Bahamas, Bahrain, Bangladesh, Belarus, Benin, Bolivia, Bosnia-Herzegovina, Botswana, Brazil, Brunei, Bulgaria, Burkina Faso, Burundi, Cambodia, Cameroon, Central African Republic, Chad, Chile, China (PRC), Colombia, Congo, Costa Rica, Croatia, Cyprus, Czech Republic, Democratic Republic of Congo, Djibouti, Dominican Republic, Ecuador, Egypt, El Salvador, Estonia, Ethiopia, Fiji, Finland, Gabon, Gambia, Ghana, Greece, Guatemala, Guinea, Guyana, Haiti, Honduras, Hong Kong, Hungary, Iceland, India, Indonesia, Iran, Iraq, Israel, Ivory Coast, Jamaica, Jordan, Kazakhstan, Kenya, Kuwait, Latvia, Lebanon, Lesotho; Liberia; Libya; Lithuania; Macao; Macedonia; Madagascar, Malawi, Malaysia, Mali, Malta, Mauritius, Morocco, Mozambique, Namibia, New Caledonia, New Zealand, Nicaragua, Niger, Nigeria, Norway, Oman, Pakistan, Panama, Papua New Guinea, Paraguay, Peru, Philippines, Poland, Portugal, Qatar, Romania, Russian Federation, Saudi Arabia, Senegal, Serbia & Montenegro, Seychelles, Sierra Leone, Singapore, Slovakia, Slovenia, South Africa, South Korea, Spain, Sri Lanka, Sudan, Surinam, Swaziland, Sweden, Switzerland, Syria, Taiwan (ROC), Tanzania, Thailand, Trinidad and Tobago, Tunisia, Turkey, Turkmenistan, Uganda, Ukraine, United Arab Emirates, Uruguay, Uzbekistan, Venezuela, Vietnam, Yemen, Zambia, Zimbabwe

Table A2 Rugman and Verbeke's (2004) regional category

<i>Region</i>	<i>Countries</i>
Asia-Pacific (20)	Australia, Brunei, Cambodia, China (PRC), Fiji, Hong Kong, India, Indonesia, Japan, Macao, Malaysia, New Caledonia, New Zealand, Papua New Guinea, Philippines, Singapore, South Korea, Taiwan (ROC), Thailand, Vietnam
EU (15)	Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Netherlands, Portugal, Spain, Sweden, United Kingdom
North America	Canada, Mexico
Outside the RV's Core (110)	Albania, Algeria, Angola, Argentina, Azerbaijan, Bahamas, Bahrain, Bangladesh, Belarus, Benin, Bolivia, Bosnia-Herzegovina, Botswana, Brazil, Bulgaria, Burkina Faso, Burundi, Cameroon, Central African Republic, Chad, Chile, Colombia, Congo, Costa Rica, Croatia, Cyprus, Czech Republic, Democratic Republic of Congo, Djibouti, Dominican Republic, Ecuador, Egypt, El Salvador, Estonia, Ethiopia, Gabon, Gambia, Ghana, Guatemala, Guinea, Guyana, Haiti, Honduras, Hungary, Iceland, Iran, Iraq, Israel, Ivory Coast, Jamaica, Jordan, Kazakhstan, Kenya, Kuwait, Latvia, Lebanon, Lesotho, Liberia, Libya, Lithuania, Macedonia, Madagascar, Malawi, Mali, Malta, Mauritius, Morocco, Mozambique, Namibia, Nicaragua, Niger, Nigeria, Norway, Oman, Pakistan, Panama, Paraguay, Peru, Poland, Qatar, Romania, Russian Federation, Saudi Arabia, Senegal, Serbia and Montenegro, Seychelles, Sierra Leone, Slovakia, Slovenia, South Africa, Sri Lanka, Sudan, Surinam, Swaziland, Switzerland, Syria, Tanzania, Trinidad and Tobago, Tunisia, Turkey, Turkmenistan, Uganda, Ukraine, United Arab Emirates, Uruguay, Uzbekistan, Venezuela, Yemen, Zambia, Zimbabwe

Note: In trying to provide with a fair test of the ideas of Rugman and Verbeke, we reconstruct their regional scheme by using the same categories they used, but never defined explicitly (given their reliance on the specific definitions of regions used by each firm on their sample).

Table A3 UN's regional category

<i>Region</i>	<i>Countries</i>
Australia and New Zealand (2)	Australia, New Zealand
Caribbean (5)	Bahamas, Dominican Republic, Haiti, Jamaica, Trinidad and Tobago
Central America (7)	Costa Rica, El Salvador, Guatemala, Honduras, México, Nicaragua, Panama
Eastern Africa (13)	Burundi, Djibouti, Ethiopia, Kenya, Madagascar, Malawi, Mauritius, Mozambique, Seychelles, Tanzania, Uganda, Zambia, Zimbabwe
Eastern Asia (6)	China (PRC), Hong Kong, Japan, Macao, South Korea, Taiwan (ROC)
Eastern Europe (9)	Belarus, Bulgaria, Czech Republic, Hungary, Poland, Romania, Russian Federation, Slovakia, Ukraine
Melanesia (3)	Fiji, New Caledonia, Papua New Guinea
Middle Africa (7)	Angola, Cameroon, Central African Republic, Chad, Congo, Democratic Republic of Congo, Gabon
Northern Africa (6)	Algeria, Egypt, Libya, Morocco, Sudan, Tunisia
Northern America (1)	Canada
Northern Europe (10)	Denmark, Estonia, Finland, Iceland, Ireland, Latvia, Lithuania, Norway, Sweden, United Kingdom
South America (12)	Argentina, Bolivia, Brazil, Chile, Colombia, Ecuador, Guyana, Paraguay, Peru, Surinam, Uruguay, Venezuela
South-Central Asia (8)	Bangladesh, India, Iran, Kazakhstan, Pakistan, Sri Lanka, Turkmenistan, Uzbekistan
South-Eastern Asia (8)	Brunei, Cambodia, Indonesia, Malaysia, Philippines, Singapore, Thailand, Vietnam

Table A3 Continued

Region	Countries
Southern Africa (5)	Botswana, Lesotho, Namibia, South Africa, Swaziland
Southern Europe (11)	Albania, Bosnia-Herzegovina, Croatia, Greece, Italy, Macedonia, Malta, Portugal, Serbia and Montenegro, Slovenia, Spain
Western Africa (12)	Benin, Burkina Faso, Gambia, Ghana, Guinea, Ivory Coast, Liberia, Mali, Niger, Nigeria, Senegal, Sierra Leone
Western Asia (15)	Azerbaijan, Bahrain, Cyprus, Iraq, Israel, Jordan, Kuwait, Lebanon, Oman, Qatar, Saudi Arabia, Syria, Turkey, United Arab Emirates, Yemen
Western Europe (7)	Austria, Belgium, France, Germany, Luxembourg, Netherlands, Switzerland

Source: <http://unstats.un.org/unsd/methods/m49/m49regin.htm>

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